UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/780,288	02/17/2004	Masayuki Ikeda	9319S-000631	7119

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EXAMINER
MULL, FRED H

ART UNIT	PAPER NUMBER
3662	

DATE MAILED: 02/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/780,288	IKEDA, MASAYUKI
	Examiner	Art Unit
	Fred H. Mull	3662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *11-22-2005, 12/14/2005*.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-24* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-24* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on *17 February 2004* is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☒ All   b) ☐ Some * c) ☐ None of:

      1. ☒ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Drawings

1.   Figure 3 should be designated by a legend such as --Prior Art-- because only

that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in

compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid

abandonment of the application. The replacement sheet(s) should be labeled

"Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct

any portion of the drawing figures. If the changes are not accepted by the examiner, the

applicant will be notified and informed of any required corrective action in the next Office

action. The objection to the drawings will not be held in abeyance.

Specification

2.   The disclosure is objected to because of the following informalities:

In ¶33, line 2, "four" should be --three--.

Appropriate correction is required.

Claim Objections

3.   Claims 13 and 14 are objected to because of the following informalities:

In line 6, "base" should be --based--.

In line 9, "calculate" should be --calculates--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4.   Claims 13-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are drawn to the apparatus of a positioning terminal, but then recite a method step: "the positioning terminal calculate[s] $TT=TR-|P-Q|/c$;" in line 9. According to the United States Court of Appeals for the Federal Circuit in *IPLX Holdings, L.L.C. v. Amazon.com, Inc.* 05-1009 (http://www.fedcir.gov/opinions/05-1009.pdf): "Because [the] claim [] recites both a system and the method for using that system, it does not apprise a person of ordinary skill in the art of its scope, and it is invalid under section 112, paragraph 2." (p. 13). In this case, the apparatus is being used to calculate TT. The examiner suggests language along the lines of the way applicant handles claim language for a calculation in claim 1, starting in line 14 (e.g. "a control device for calculating $TT=TR-|P-Q|/c$").

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5.   Claims 1-6, 8-11, 13-17, and 19-22 are rejected under 35 U.S.C. 102(b) as being

anticipated by King, previously cited.

In regard to claims 1-6, 8-11, 13-16, and 19-21, King discloses:

a plurality of first signal sources (GPS satellites) each emitting a respective first

signal, and one or more second signal sources (BSs) each emitting a respective second

signal, the first signals being synchronous with a reference time and the second signals

being non-synchronous with the first signals, for, based on a signal propagation time

and signal propagation speed of the first signals, determining a distance from the

positioning terminal to the first signal sources so as to determine a position of the

positioning terminal, said positioning system comprising:

a measurement device (MS) for receiving the first signals from the first signal

sources to determine the position a P of the measurement device and a time of

measurement when the measurement device receives the first signals and for, based

on the time of measurement, measuring a receiving time (TR) of a predetermined event

of the second signals (col. 2, line 49 to col. 3, line 61);

a control device for determining a signal propagation time (t) between the

measurement device and one of the second signal sources by calculating a relative

distance |P-Q| between the measurement device and the one second signal source

based on the position P measured by the measurement device and a position Q of the

one second signal source and by dividing the resulting distance by the signal

propagation speed, and for determining a time (TT) at which the one second signal

source originates the predetermined event by solving TR-t (col. 3, lines 11-16);

the positioning terminal having a receiving device for receiving the signals from

the first and second signal sources (col. 1, line 66 to col. 2, line 2; col. 8, lines 55-56);

and

a communication device for communicating between the control device and the

positioning terminal (col. 2, lines 3-11),

wherein the positioning terminal uses the time TT as a reference to receive the

signals from the first signal sources for positioning (col. 1, line 66 to col. 2, line 2; col. 8,

lines 55-56).

In regard to claims 17 and 22, King further discloses the measurement device

further comprises a mobile terminal in good conditions, where the position P of the

measurement device can be determined without accurate time information and

measures P and TR to voluntarily report the measured P and TR to the control device in

the same mobile communication network (col. 8, lines 27-31).

6.   Claims 1-6, 8-11, 13-16, 18-21, and 23 are rejected under 35 U.S.C. 102(e) and

102(a) as being anticipated by Krasner.

In regard to claims 1-6, 8-11, 13-16, and 19-21, Krasner discloses:

a plurality of first signal sources (GPS satellites) each emitting a respective first

signal, and one or more second signal sources (BSs) each emitting a respective second

signal, the first signals being synchronous with a reference time and the second signals

being non-synchronous with the first signals, for, based on a signal propagation time

and signal propagation speed of the first signals, determining a distance from the

positioning terminal to the first signal sources so as to determine a position of the

positioning terminal, said positioning system comprising:

a measurement device (MS) for receiving the first signals from the first signal

sources to determine the position a P of the measurement device and a time of

measurement when the measurement device receives the first signals and for, based

on the time of measurement, measuring a receiving time (TR) of a predetermined event

of the second signals (col. 7, line 34 to col. 7, line 7);

a control device for determining a signal propagation time (t) between the

measurement device and one of the second signal sources by calculating a relative

distance |P-Q| between the measurement device and the one second signal source

based on the position P measured by the measurement device and a position Q of the

one second signal source and by dividing the resulting distance by the signal

propagation speed, and for determining a time (TT) at which the one second signal

source originates the predetermined event by solving TR-t (col. 3, lines 11-16);

the positioning terminal having a receiving device for receiving the signals from

the first and second signal sources (col. 1, line 66 to col. 2, line 2; col. 8, lines 55-56);

and

a communication device for communicating between the control device and the

positioning terminal (col. 2, lines 3-11),

wherein the positioning terminal uses the time TT as a reference to receive the

signals from the first signal sources for positioning (col. 1, line 66 to col. 2, line 2; col. 8,

lines 55-56).

In regards to claims 18 and 23, Krasner further discloses the measurement

device further comprises a mobile terminal in good conditions, where the position P of

the measurement device can be determined without accurate time information and

measures P and TR according to a request from the control device in the same mobile

communication network report the measured P and TR to the control device in the same

mobile communication network (col. 7, lines 37-40).

7.   Claims 1-6, 8-11, 13-16, and 19-21 are rejected under 35 U.S.C. 102(b) as being

anticipated by Soliman '739.

Soliman '739 discloses:

a plurality of first signal sources (GPS satellites) each emitting a respective first

signal, and one or more second signal sources (BSs) each emitting a respective second

signal, the first signals being synchronous with a reference time and the second signals

being non-synchronous with the first signals, for, based on a signal propagation time

and signal propagation speed of the first signals, determining a distance from the
positioning terminal to the first signal sources so as to determine a position of the
positioning terminal, said positioning system comprising:

a measurement device (MS) for receiving the first signals from the first signal
sources to determine the position a P of the measurement device and a time of
measurement when the measurement device receives the first signals and for, based
on the time of measurement, measuring a receiving time (TR) of a predetermined event
of the second signals (col. 21, line 48 to col. 22, line 32);

a control device for determining a signal propagation time (t) between the
measurement device and one of the second signal sources by calculating a relative
distance |P-Q| between the measurement device and the one second signal source
based on the position P measured by the measurement device and a position Q of the
one second signal source and by dividing the resulting distance by the signal
propagation speed, and for determining a time (TT) at which the one second signal
source originates the predetermined event by solving TR-t (col. 22, lines 10-32);

the positioning terminal having a receiving device for receiving the signals from
the first and second signal sources (col. 2, lines 28-47); and

a communication device for communicating between the control device and the
positioning terminal (col. 2, lines 3-11),

wherein the positioning terminal uses the time TT as a reference to receive the
signals from the first signal sources for positioning (col. 21, lines 62-64).

8.   Claims 1-6, 8-11, 13-16, and 19-21 are rejected under 35 U.S.C. 102(b) as being

anticipated by Nir.

        Nir discloses:

        a plurality of first signal sources (GPS satellites) each emitting a respective first

signal, and one or more second signal sources (BSs) each emitting a respective second

signal, the first signals being synchronous with a reference time and the second signals

being non-synchronous with the first signals, for, based on a signal propagation time

and signal propagation speed of the first signals, determining a distance from the

positioning terminal to the first signal sources so as to determine a position of the

positioning terminal, said positioning system comprising:

        a measurement device (MS) for receiving the first signals from the first signal

sources to determine the position a P of the measurement device and a time of

measurement when the measurement device receives the first signals and for, based

on the time of measurement, measuring a receiving time (TR) of a predetermined event

of the second signals (col. 7, lines 31-60);

        a control device for determining a signal propagation time (t) between the

measurement device and one of the second signal sources by calculating a relative

distance |P-Q| between the measurement device and the one second signal source

based on the position P measured by the measurement device and a position Q of the

one second signal source and by dividing the resulting distance by the signal

propagation speed, and for determining a time (TT) at which the one second signal

source originates the predetermined event by solving TR-t (col. 7, lines 31-60);

the positioning terminal having a receiving device for receiving the signals from

the first and second signal sources (col. 9, lines 3-13); and

a communication device for communicating between the control device and the

positioning terminal (col. 7, lines 43-47),

wherein the positioning terminal uses the time TT as a reference to receive the

signals from the first signal sources for positioning (col. 9, lines 3-13).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9.   Claims 18 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable

over King.

King fails to disclose the measurement device sending the results in response to

a request. However, it is know that the amount of communication traffic from customers

varies in mobile communication systems. It would have been obvious to, at time of high

customer traffic, to disable the simultaneous/automatic transmission of results until

consumer traffic dropped down to a level where extra bandwidth was available, and

then request that the result transmission continue.

10.   Claims 7, 12, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable

over any one of King, Krasner, Soliman '739, and Nir, and in further view of Vannucci.

King/Krasner fails to discloses television broadcast stations as the second signal

sources.

Vannucci discloses using television broadcast stations as secondary signal

sources to be used with GPS satellites for positioning (¶6, 95).

It would have been obvious to use the know television broadcast station

secondary signal sources of Vannucci as positioning transmitters for areas where the

number of visible GPS satellites plus BSs are not sufficient for a position calculation.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Fred H. Mull whose telephone number is 571-272-6975.

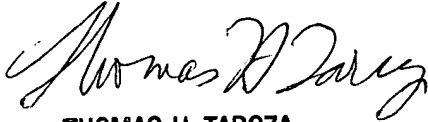The examiner can normally be reached on M-F 9:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Thomas H. Tarcza can be reached on 571-272-6979. The fax phone

number for the organization where this application or proceeding is assigned is 571-

273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

                                    Fred H. Mull
                                    Examiner
                                    Art Unit 3662

fhm

                                    THOMAS H. TARCZA
                                    SUPERVISORY PATENT EXAMINER
                                    TECHNOLOGY CENTER 3600